The Antarctic Canary -- the human impact on climate change

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As the UK attempts to move towards a low carbon economy, leading scientists and a world expert on sustainable energy in buildings this week discuss the evidence for climate change and possible solutions. A public seminar – 'the Antarctic Canary – the human impact on climate change' at the BA Festival of Science in Norwich was held on Monday 4 September.

Evidence from an 800,000-year Antarctic ice core record shows unprecedented atmospheric change due to carbon dioxide and other greenhouse gases. Dr Eric Wolff from British Antarctic Survey (BAS), leader of the science team for the European Project for Ice Coring in Antarctica (EPICA) says,

"Ice cores reveal the Earth's natural climate rhythm over the last 800,000 years. When carbon dioxide changed there was always an accompanying climate change. Over the last 200 years human activity has increased carbon dioxide to well outside the natural range and we have no analogue for what will happen next."

Although large increases in carbon dioxide may be alleviated by natural sinks in the ocean and on land, a critical issue is how these sinks will behave in the future. For the last 15 years international scientists, including the Intergovernmental Panel on Climate Change, have used research into carbon cycle by Dr Corrinne Le Quéré of UEA and BAS. She says,

'Our land and oceans may well become less efficient carbon sinks as concentrations increase. We cannot rely on them to solve the problem.'

Scientific knowledge, especially about climate change, is essential for a sustainable economy. In the UK the built environment accounts for around 50% of energy consumption, with housing alone contributing around 27% of UK carbon dioxide emissions.

Professor Peter Smith, University of Nottingham and author of 'Architecture in a Climate of Change', offers creative solutions to improve the energy efficiency of buildings. He says,

"There is an urgent need to find innovative technologies to reduce the impact we are having on our climate. If we are committed to a low carbon economy the UK needs a vigorous twin track programme of demand reduction and renewable energy technology. Governments may have only 10 years in which to determine the destiny of our planet – giving only five years in which to develop feasibility and design studies. I am disappointed that the recent UK Energy Review totally fails to appreciate the urgency of the situation."

Source: British Antarctic Survey

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